

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Water Resources Division

RECORDS OF WATER LEVEL AND PUMPAGE FOR 1968 IN
JOSHUA TREE NATIONAL MONUMENT, CALIFORNIA


Prepared in cooperation with the
National Park Service

ADMINISTRATIVE REPORT
For U.S. Government use only

Garden Grove, California

1969
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By

G. A. Miller

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RECORDS OF WATER LEVEL AND PUMPAGE FOR 1968 IN
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This report, prepared at the request of the National Park Service, is part of a continuing inventory by the Geological Survey of general hydrologic conditions at Joshua Tree National Monument. The report includes water levels in selected observation wells in the monument for spring and autumn 1968 and pumpage data from Kaiser Steel Corp. for its wells in Pinto Basin during 1960-68. Data on pumpage prior to 1960 and on water levels prior to those shown are published in U.S. Geological Survey Water-Supply Paper 1475-0 and in previous annual reports to the National Park Service.

Hydrographs of observation wells in the monument (fig. 2) show a general, irregular, decline in ground-water level of from less than 10 feet to more than 50 feet during the period of record, 1958-68. There is little correlation between the magnitude of water-level decline and pumping; for example, there is little or no pumping in the area near well 1S/7E-27R1 (Willets well), where the largest decline in water level occurred. Most of the decline is probably due to the relative dryness of the period. Increased precipitation during the last few years caused the water level in some wells to rise, but not to 1958 levels.

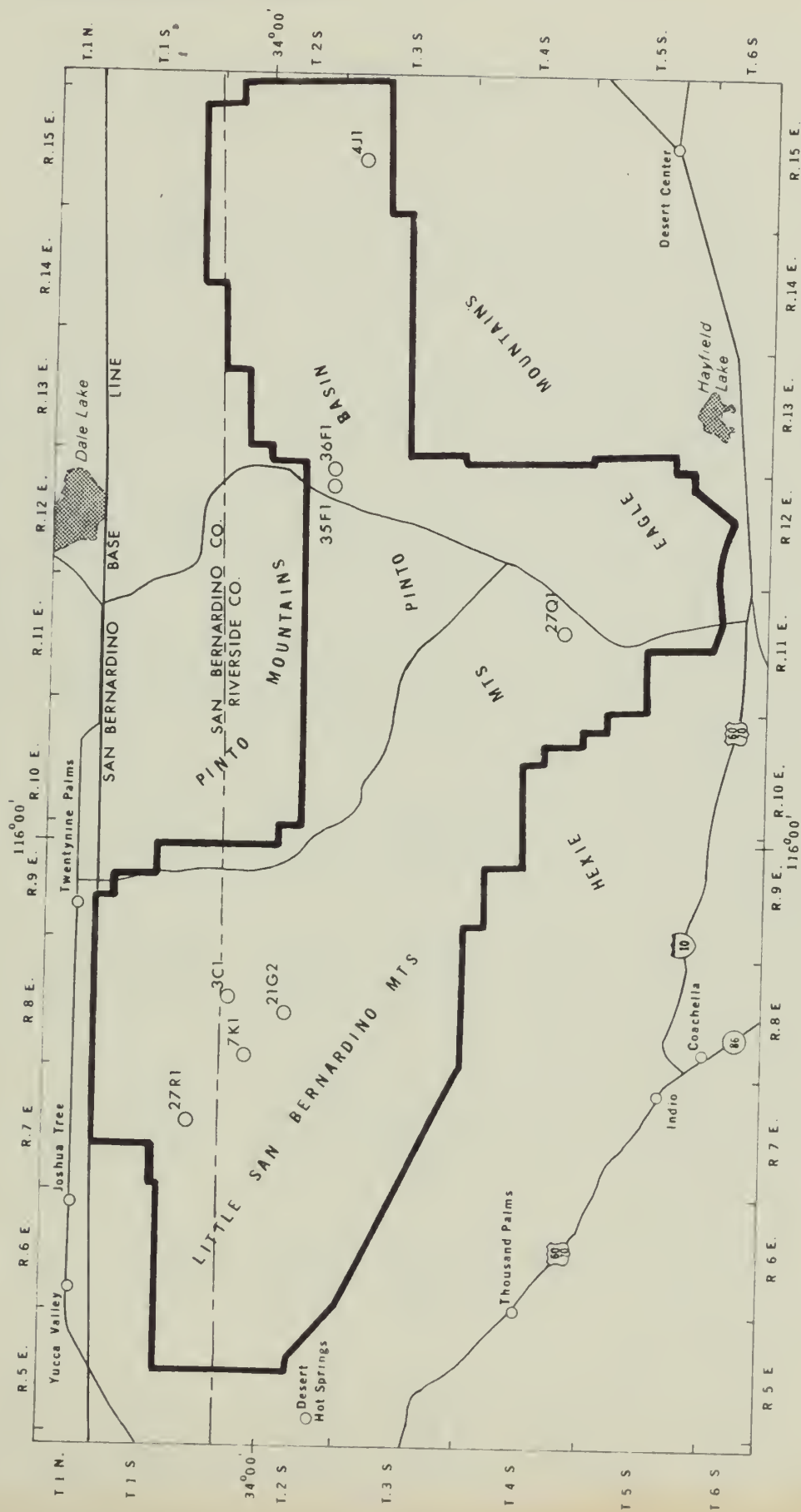


FIGURE 1.—Map of Joshua Tree National Monument showing location of observation wells.

[Metered in thousands of gallons by Kaiser Steel Corp., except as indicated]

	1960	1961	1962	1963	1964	1965	1966	1967	1968
January	a47,438	40,642	a41,750	a94,895	90,566	47,352	87,966	81,707	53,974
February	a47,438	38,996	a39,500	a91,789	93,578	68,739	74,915	81,046	56,390
March	47,642	53,092	a54,650	a96,320	95,823	73,604	85,967	92,209	66,051
April	49,394	a55,044	a55,540	a93,029	95,449	65,326	94,301	76,480	80,851
May	50,635	a58,658	a59,790	a92,799	95,247	76,176	94,969	87,759	88,926
June	54,746	60,845	a62,850	102,085	94,186	76,347	92,445	86,660	73,645
July	44,657	67,980	89,318	110,127	94,964	87,849	83,258	93,946	87,853
August	55,808	63,479	77,806	105,358	90,967	94,977	a83,300	91,140	104,765
September	51,654	a57,563	69,830	92,943	91,230	92,732	a83,400	101,729	79,712
October	42,101	a46,918	64,742	118,039	93,676	85,694	a83,500	115,367	75,700
November	38,539	a42,947	a66,400	93,121	105,748	94,268	83,685	a90,804	48,920
December	39,307	43,692	a67,280	99,776	93,892	106,427	72,944	a90,804	a74,253
Total ^{2/}	569,000	630,000	749,000	1,190,000	1,140,000	969,000	1,020,000	1,090,000	891,000
(gal) ^{3/}									
Total ^{3/}	1,700	1,900	2,300	3,600	3,500	3,000	3,100	3,300	2,700

1. For pumpage prior to 1960, see U.S. Geological Survey Water-Supply Paper 1475-0, "Hydrologic and Geologic Reconnaissance of Pinto Basin, Joshua Tree National Monument, Riverside County, California," by Fred Kunkel, 1963, p. 558.

2. Rounded to three significant figures.

3. Rounded to two significant figures.

a. Meter not in operation; quantity estimated by Kaiser Steel Corp.

Table 2.--Ground-water levels in observation wells

Depths of wells given in whole feet were reported by owners, drillers, or others; depths given in feet and tenths of a foot were measured below land-surface datum by the U.S. Geological Survey. Measurements are in feet below or above (+) the described point of reference.

Standardized footnotes

- | | |
|---|--|
| a. well being pumped. | h. Tape measurement. |
| b. Well pumped recently. | i. Affected by outside influence (wind, atmospheric pressure, ocean tides, railroad trains). |
| c. Nearby well being pumped. | j. Water level below sea level. |
| d. Nearby well pumped recently. | k. Measurement from recorder chart. |
| e. Estimated. | m. Obstruction in well above water surface. |
| f. Dry. | n. No measurement. |
| g. Measurement by outside agency or person. | |

Copper Mountain Hydro Subunit (X-8.B0)
Joshua Tree National Monument

WELLS IN OBSERVATION AREA OR BASIN

San Bernardino

COUNTY

Altitude of land-surface datum **3,770** feet above mean sea level

Depth of well	182.0	ft.
---------------	-------	-----

1S/7E-27R1 S 340302N161406.1

National Park Service (Willets Well). In Quail Wash south of Joshua Tree (village) and west of Lost Horse Valley. Drilled unused well in alluvium, diameter 5 inches.

1958, 1961-
to and calculate _____, to _____, west, _____ ft. _____, 19

all water levels are referenced to **land-surface datum**

[illegible]

9

GROUND-WATER LEVELS IN OBSERVATION WELLS

Riverside

C. INT.

2S/8E-3C1 S

340149N1160800.1

Der: f w 108

Area	Area of land under cultivation	Area of land under forest	Area of land under other uses
1. Agriculture	4,300		
2. Forestry		4,300	
3. Other uses			4,300
Total	4,300	4,300	4,300

[illegible]

Sheep Pass. Drilled domestic water-table well in residuum, diameter 8 inches. South of the Wonderland of Rocks and about 2 miles north of National Park Service (Queen well).

1961, 1965-

[1] J. J. Condon, *Phys. Rev.* **92**, 170 (1953).

land-surface datum

[illegible]

Riverside

CITY

2S/8E-21G2 S

335903N1160850.1

43.0

10

Latitude of land-surface station

Dug out of well National Park Service (Lost Horse No. 2). East side of Lost Horse Valley near Ryan Campground. Dug public supply well in residuum, diameter 48 inches.

1961-

land-surface datum.

[illegible]

GROUND-WATER LEVELS IN OBSERVATION WELLS Pinto Hydro Subunit (X-17.CO)

~~Joshua Tree National Monument~~

Riverside

227

25/12B-36F1 S

444

Altitude of land-surface datum 1,347 feet above mean sea level

1,347

Well code number: 335718N1154034.1

1 well. National Park Service (Dale Holmes well, Gold Rose well). In Pinto Basin, 1 mile east of Gold Crown Road at Mission well. Drilled domestic well in alluvium.

1961-

iii. sit water level

19

Lower_

11

el

land-surface datum.

[illegible]

GROUND-WATER LEVELS IN OBSERVATION WELLS
Pinto Hydro Subunit (X-17.CO)

Riverside

(111)

3S/15B-4J1 S

Do. of will 575

1,080.6

... 31.10.1941. 1941.

335612N1152433.1

D. 1111 National Park Service (Kaiser No. 2). At east end of Pinto Basin near Kaiser Steel Company's Eagle Mountain wells. Drilled well in alluvium, diameter 16 inches.

1954-

[illegible]

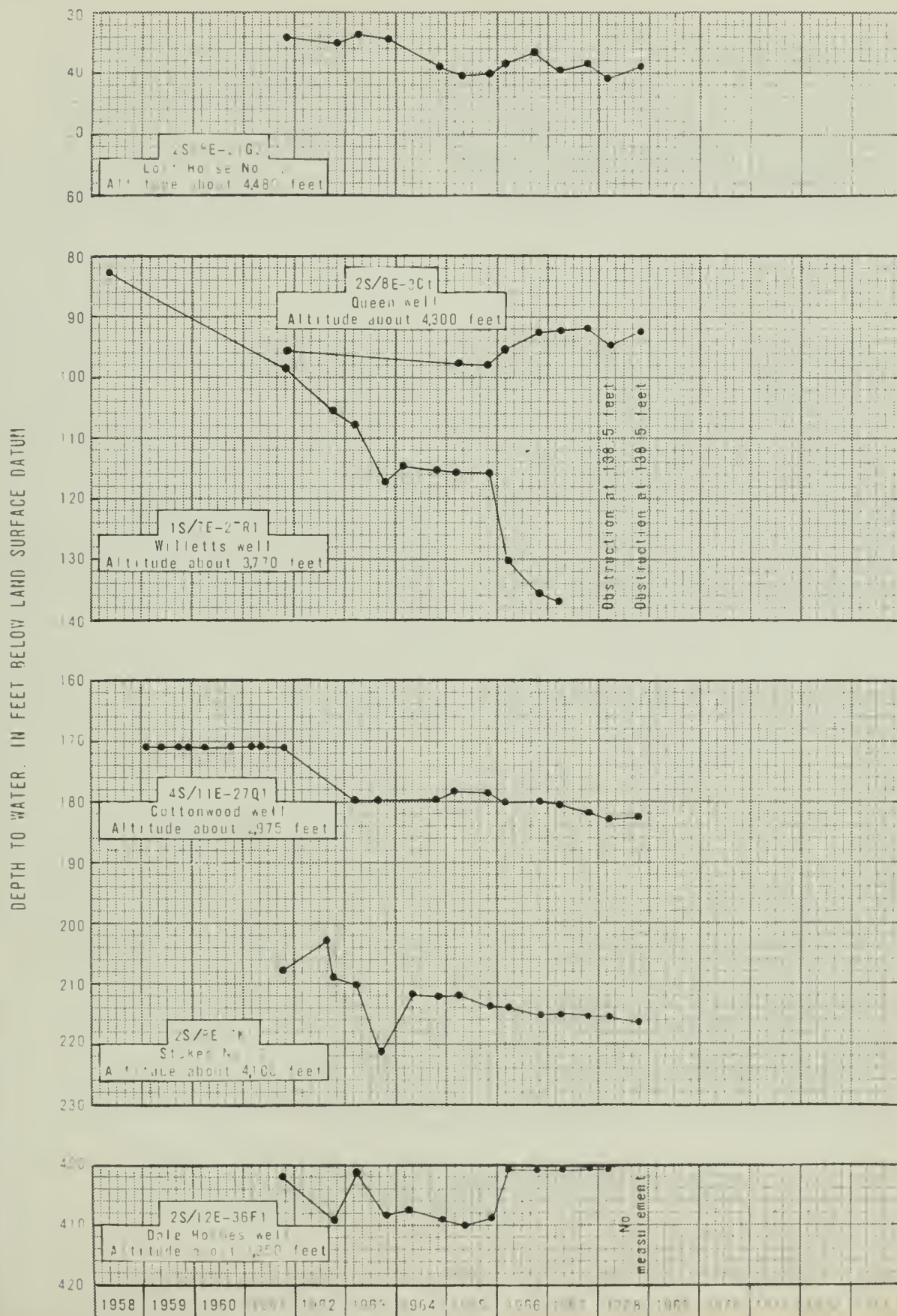


FIGURE 2.--Hydrographs of selected wells in Joshua Tree National Monument

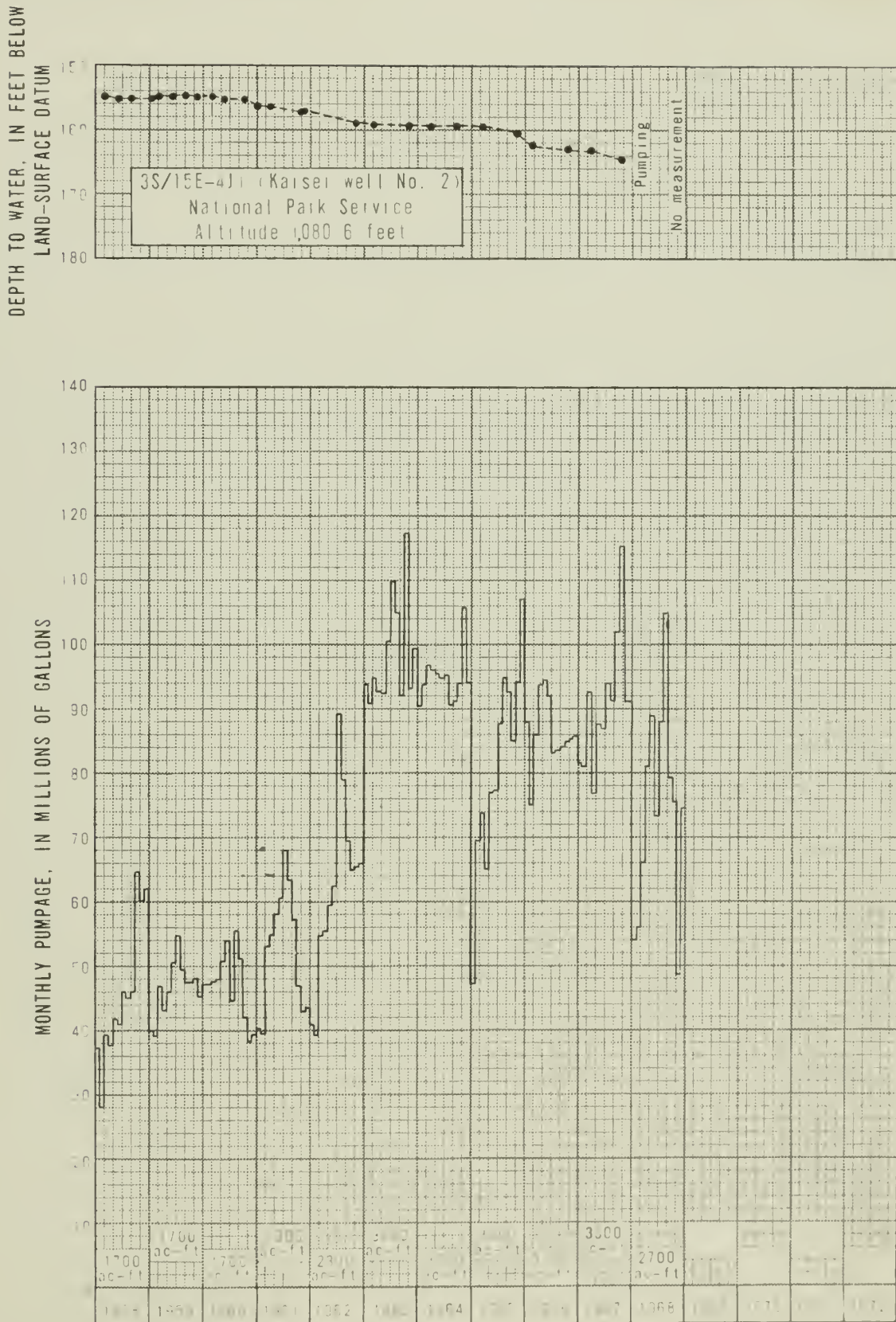


FIGURE 3.--Hydrograph of well and pumpage in eastern part of Pinto Basin

